

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A method of printing a substrate having security features comprising the steps of:

importing a digitized design comprising a plurality of pixels;

assigning pixel illumination ranking values corresponding to the plurality of pixels

using a spot algorithm to create a first spot cell for a custom halftone dot; and

printing a substrate having at least one region comprising the custom halftone dot.

2. (Original) The method of claim 1 wherein the step of assigning pixel illumination ranking values comprises setting values corresponding to imported grey-scale pixel values of the digitized design.

3. (Original) The method of claim 2 wherein darker grey-scale pixel values are assigned higher pixel illumination ranking values.

4. (Original) The method of claim 1 wherein the step of assigning pixel illumination ranking values comprises converting imported color pixel values to grey-scale pixel values and setting values corresponding to grey-scale pixel values of the digitized design.

5. (Original) The method of claim 4 wherein darker grey-scale pixel values are assigned higher pixel illumination ranking values.

6. (Original) The method of claim 1 wherein the step of assigning pixel illumination ranking values comprises selecting at least one growth center of the digitized design and assigning illumination ranking to imported dark bi-level pixels based on the distance from the dark pixels to the at least one growth center.

7. (Original) The method of claim 1 wherein the step of assigning pixel illumination ranking values comprises selecting a growth center of the digitized design and assigning illumination ranking to imported dark bi-level pixels based on the distance along a single axis from the dark pixels to the growth center.

8. (Original) The method of claim 1 further comprising the step of scaling the pixel illumination ranking values for use in a printer language.

9. (Original) The method of claim 1 further comprising the step of saving the spot cell for later use.

10. (Original) The method of claim 7 further comprising the step of assigning the spot cell to a graphical element selected from the group comprising photographs, raster images, logos, symbols, text, type faces, rules, lines, circles, arcs, splines, colored areas, borders, pantographs, or patterns.

11. (Original) The method of claim 1 further comprising the steps of:
providing a second digitized design comprising a plurality of pixels;
assigning pixel illumination ranking values corresponding to the second plurality of
pixels to create a second spot cell for a second custom halftone dot; and
assigning the first spot cell to be printed in a first printing density range, the first and
second spot cells to be printed in a second printing density range, and the
second spot cell to be printed in a third density range.
- 12-14. (Cancelled).
15. (Currently Amended) A computer programmed to create a substrate having security
features comprising:
means for importing an image comprising a plurality of pixels;
means for ~~generating pixel ranking values to convert the image into a custom~~
~~halftone dot~~ assigning pixel illumination ranking values corresponding to the
plurality of pixels using a spot algorithm to create a spot cell for a custom
halftone dot; and
means for selecting a region on the substrate to comprise the halftone dot.

16. (Original) The programmed computer of claim 15 further comprising means for saving the custom halftone dot in a library for future use.

17-18. (Canceled)

19. (New) A computer program for printing a halftone dot on a substrate, the computer program stored on a computer-readable medium for operating a computing element and comprising:

a code segment operable to be executed by the computing element to import a digitized design comprising a plurality of pixels;

a code segment operable to be executed by the computing element to assign pixel illumination ranking values corresponding to the plurality of pixels using a spot algorithm to create a spot cell for a custom halftone dot; and

a code segment operable to be executed by the computing element to print a substrate having at least one region comprising the custom halftone dot.

20. (New) The computer program of claim 19, wherein the code segment assigns pixel illumination ranking values by selecting at least one growth center of the digitized design and assigning illumination ranking to imported dark bi-level pixels based on the distance from the dark pixels to the at least one growth center.

21. (New) The computer program of claim 19, wherein the code segment assigns pixel illumination ranking values by selecting a growth center of the digitized design and assigning illumination ranking to imported dark bi-level pixels based on the distance along a single axis from the dark pixels to the growth center.

22. (New) The computer program of claim 19, further comprising a code segment operable to scale the pixel illumination ranking values for use in a printer language.

23. (New) The computer program of claim 19, wherein the code segment assigns pixel illumination ranking values utilizing-

white to gray to black transitions of the pixels, and
the locations of the pixels within the digitized design.

24. (New) The method of claim 1, wherein the pixel illumination ranking values are assigned utilizing-

white to gray to black transitions of the pixels, and
the locations of the pixels within the digitized design.